

# Agent Orange Brief

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## AGENT ORANGE AND RESPIRATORY CANCERS

### **What are respiratory cancers?**

This refers to carcinomas of the lung, larynx, trachea, and bronchus.

### **Why are Vietnam veterans concerned about respiratory cancers? Are they caused by Agent Orange?**

Many Vietnam veterans have been diagnosed with a respiratory cancer and others have expressed concern about developing such a cancer. Respiratory cancers are now the leading causes of cancer death in the United States. Some research has suggested that respiratory cancers may be associated with exposure to herbicides, but there is no conclusive scientific evidence that Agent Orange or other herbicides cause these conditions.

### **What did the Veterans' Advisory Committee on Environmental Hazards conclude with regard to respiratory cancers?**

In May 1991, the Advisory Committee considered approximately forty studies dealing with lung cancer. The Committee observed that most of the studies failed to adequately consider exposure documentation and potential confounding factors, particularly smoking. The only study, considered by the Advisory Committee, to address the factor of smoking was negative with regard to lung cancer. The Advisory Committee concluded that, on the basis of available epidemiological data, there is no evidence of a significant statistical association between exposure to herbicides containing dioxin and lung cancer.

### **What was VA's response to the Advisory Committee's finding?**

On June 27, 1991, Secretary Derwinski found that sound medical and scientific evidence does not establish the required association. On January 21, 1992, the Federal Register published a proposed rule that would have added lung cancer to the list of "diseases not associated with exposure to herbicides containing dioxin." The January 21 proposal was never finalized. (See 57 Fed. Reg. 2236, January 21, 1992).

### **What did the National Academy of Sciences (NAS) conclude about respiratory cancers in its 1993 report, entitled Veterans and Agent Orange - Health Effects of Herbicides Used in Vietnam?**

The NAS found "limited/suggestive evidence" -- a category it defined as meaning that evidence suggests an association between herbicide exposure and a specific disease, but that chance, bias, and confounding factors cannot be ruled out with confidence -- of association between herbicide exposure and the subsequent development of respiratory cancers (including cancers of the lung, larynx, trachea, and bronchus).

**What was VA's response to the NAS finding?**

In reviewing the NAS report, which noted that not all studies had fully controlled for or evaluated smoking as a confounding factor, VA gave weight to the fact that the studies found relatively high risks for respiratory cancers in production workers. VA also noted that despite the failure of some to control for smoking, it is unlikely that there were major differences in smoking patterns between the study and control groups.

Considering all the evidence, Secretary Brown determined that the credible evidence for an association outweighs the credible evidence against an association between exposure to herbicides used in Vietnam and the subsequent development of respiratory cancers. Based on existing scientific evidence, a thirty-year manifestation period was established.

The proposed rule regarding respiratory cancers was published for public comment in the Federal Register in February 1994. (See 59 Fed. Reg. 5161, February 3, 1994). The final rule was published in the Federal Register in June 1994. (See 59 Fed. Reg. 29723, June 9, 1994).

**What did Public Law 103-446 do for Vietnam veterans with respiratory cancers?**

Section 505, Public Law 103-446, the Veterans' Benefits Improvement Act of 1994, enacted November 3, 1994, codified (established in law) presumptions of service connection for certain diseases -- including respiratory cancers (cancer of the lung, bronchus, larynx, or trachea) manifest to a degree of 10 percent or more within 30 years of military service in Vietnam.

**What did the NAS conclude about respiratory cancers in the 1996 update?**

The NAS noted that among the many epidemiologic studies of respiratory cancers reviewed, positive associations were found consistently only when TCDD (dioxin) or herbicide exposures were probably high and prolonged. This was "especially true in the largest, most heavily exposed cohorts of chemical production workers exposed to TCDD." The NAS commented that studies of farmers tended to show a decreased risk of respiratory cancers (perhaps due to lower smoking rates), and studies of Vietnam veterans were inconclusive. The report concluded that the evidence for this association was limited/suggestive rather than sufficient, because of the "inconsistent pattern of positive findings across populations with various degrees and types of exposure" and because the most important risk factor -- cigarette smoking -- was not fully controlled for or evaluated in all studies.

**What did the NAS conclude about respiratory cancers in the 1998 update?**

With regard to laryngeal cancer, the report states the following:

Studies published since Update 1996 continue to support the conclusion that there is limited/suggestive evidence of an association. The committee concluded that the evidence for this association was limited/suggestive rather than sufficient because of the inconsistent pattern of positive findings across populations with varying degrees and types of exposure and because the most important risk factors for laryngeal cancers--cigarette smoking and alcohol consumption--were not fully controlled for or evaluated in the studies.

With regard to lung and trachea cancer, the report states the following:

In summary, the most recently published studies continue to support the placement of lung and trachea cancer in the category "limited/suggestive evidence of an association." Several studies suggest a higher rate of these cancers in individuals with known exposure to phenoxy herbicides or dioxin, and there is some evidence of a dose-response relationship. Whereas smoking undoubtedly plays a role in these cancers, the consistency of the finding across several studies argues against the notion that it is the sole explanatory factor.

**Where can a veteran get additional information on this subject?**

Information on respiratory cancers and related matters can be obtained at VA medical center libraries, from the Registry Physicians at every VA medical center, or from the Environmental Agents Service (131), Department of Veterans Affairs, 810 Vermont Avenue, N.W., Washington, DC 20420.